

ON *UNIO SUBROSTRATUS*, SAY.

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The records which relate to *Unio subrostratus* afford a curious instance of the obscurity in which the identity of a species may be involved through the influence of trifling errors. Practically up to the present time *U. subrostratus* has had scarcely more value in scientific records than if it had never been described.

To dispel the obscurity which invests this subject, the records which most essentially bear upon the identification of the species will now be offered for consideration, commencing with Say's description of the species transcribed from page 134 of W. G. Binney's edition of Say's conchological writings.

"*UNIO SUBROSTRATUS*, transversely elongated, subrostrated, radiated.

Inhabits Wabash.

Transversely elongate subovate, brownish or pale ochreous, with numerous dark-green radii; beaks but little elevated with a few small, angular, concentric lines; ligament margin a little compressed; anterior margin¹ somewhat elongated, hardly subrostrated; separated by an obtuse angle from the ligament margin; base arquated; posterior margin rounded; within white, often slightly tinted with flesh color; somewhat iridescent on the margins, particularly the anterior margin; substance of the shell not thick; teeth very oblique, crested.

Length one inch and two-fifths; breadth three inches and one-fifth. Convexity hardly over one inch.

This may be said to be the analogue of the *U. nasutus*, nob. of the western waters. The rostrum, however, is not so definite, and it is a more convex shell. The aged shell is dark-brown, but near the beaks reddish-brown."—January 15, 1830, New Harmony Disseminator.

Subsequently Mr. Say put *Unio iris*, Lea, in the synonymy of *subrostratus*,² and this mistake on the part of Mr. Say may be presumed to be the source of the obscurity that *subrostratus* has

¹ Say reversed our present understanding of the anterior and posterior of Uniones.

² See page 225, Binney's ed. of Say.

since been involved in. There is no evidence to show that Mr. Say had any other knowledge of *U. iris* than a reading of Mr. Lea's description of that species.

Mr. Lea in his treatment of synonymy, follows Say's idea of the identity of *iris* and *subrostratus*, but places *iris* first. See Synopsis (1870), page 60. This serves to make the obscurity still more complete, and were it not for Mr. Lea's foot-note to *iris* on the page just cited, *subrostratus* might for all time have remained in the synonymy of *iris*, or what amounts to the same thing, the two might continue to be regarded as identical. As Mr. Lea's foot-note affords an important hint by which the identification of *subrostratus* is approached, it is here transcribed.

"Mr. Say in his *Synonymy*, gives *iris* as a synonym of *subrostratus*. If they were the same I would be entitled to precedence, as my description bears date March, 1829, while his is January, 1831. His description, however, of *subrostratus* does not apply to my *iris*, and certainly this shell could not have been under his eye when his description was made. He says that the *subrostratus* 'may be said to be the analogue of the *Unio nasutus* (nobis) of the western waters.' As the *U. nasutus* inhabits the western waters, a variety of that species may have been described by him for *subrostratus*."—Lea's Synopsis, 1870, page 60, foot-note 4.

The most significant parts of the above note are underlined

In endeavoring to ascertain the facts which bear upon Mr. Lea's closing sentence in the above note, I have obtained specimens of *U. nasutus* from the northern counties of Ohio, the streams of which flow into Lake Erie. In Indiana, Illinois, and Iowa my correspondents find shells which they call *nasutus*, but which are plainly referable to Lea's description and figure of *U. Nashvillianus*. The males of this species satisfy the demands of Say's description of *subrostratus* even to local reference, a part of my specimens being from the ponds of the "Wabash."

Extending the inquiry I find that this species merges by slight variations into the form known as *U. Mississippiensis*, Conrad.

The geographical distribution of *U. subrostratus* reaches Indiana, Illinois, Iowa, Nebraska, Tennessee, Mississippi, and Alabama. Further investigations may reveal its presence in all the States along the Lower Mississippi.

I am indebted for specimens and information in aid of this investigation to the following named gentlemen: C. M. Wheatley,

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